

CONSOLIDATED INFORMATION TECHNOLOGY SERVICES TASK ASSIGNMENT (TA)

1. **TITLE:** (D3) RTD COMPUTER SYSTEM ADMINISTRATION

TA No: RD001-Rev13

Task Area Monitor:

Alternate Task Area Monitor:

NASA POC: None

Software Control Class: Low Control

Type of Task: Recurring Task

2. **BACKGROUND**

This task will cover the unique computer systems in the Research and Technology Directorate (RTD). Each of the branches within the competency has unique requirements for its computers, determined by the unique set of disciplines worked and the unique set of customer needs addressed in the branch. Even though the hardware used for these systems may be similar, or even identical, the configurations (network, peripherals and software) are necessarily very different. The computer systems consist of Unix workstations and PCs. These computers are used in laboratory environments, supporting laboratory experiments as well as software and control law development. The computer systems are located in the following buildings 1168, 1220, 1268A, 1268D, and 1299. Software includes various commercial analysis, Matlab, and graphics software packages, as well as license managers, compilers and software developer utilities. On-site system administration for hardware and software is required to maintain network security and resource availability for NASA personnel, contractors, and grantees, within and outside the Langley network domain.

3. **OBJECTIVE**

The objective of this task assignment is to provide system administration support for the RTD computer labs.

4. **GENERAL IT SUPPORT SERVICES**

Services Specified Through Exhibit A:

Services will include: System Administration, IT Security Administration, Hardware Maintenance, System Software Maintenance, Applications Management, Customer Support, and IT Consultation.

Refer to Exhibit A, Inventory of Equipment and Software (attached), that has been completed for each participating branch within the competency to define the required general IT support services on a branch level.

The service of IT Security Administration shall be provided for those ¿general support systems¿ (see NPG 2810.1) for which the box indicating ¿IT Security Administration

Required, is checked in Exhibit A. The level of security shall be consistent with the information category identified for each such system.

Any system software, application software, or database software that is licensed to run on a particular item of equipment is entered in the respective column for that item. Software that does not require a license is also included if it is relevant to any of the required services.

The services of System Administration (SA), Hardware Maintenance (HM), System Software Maintenance (SSM), Applications Management (AM), and Database Administration (DBA), are required for the items of equipment or software that are checked in the respective columns of Exhibit A.

Customer Support and IT Consultation and Training:

The Contractor shall provide the basic level of Customer Support and IT Consultation and Training given in Sections 4.7 and 4.8 clauses a) and c) of the SOW for all General IT Support Services.

Exceptions and Additional Requirements:

Centralized asset management tools will not be required, but can be used, for this task. (Section 4.1.1 clause b)

For systems that are covered under vendor or third-party hardware or software maintenance contracts, initial diagnosis of problems or failures shall be conducted by the Contractor, and the maintenance contractor shall be contacted by the Contractor for problem resolution. Hardware maintenance shall not include acquisition of replacement parts, but quotes for replacement parts will be obtained from vendor or third-party sources and provided to NASA branch point of contact for procurement. System Software Maintenance shall not include acquisition of software upgrades, but quotes for replacement parts will be obtained from the vendor or third-party sources and provided to the NASA branch point of contact for procurement.

Contractor shall assist the Government in coordination of construction of new computer facilities and relocation of computer equipment, where applicable.

Contractor personnel will be located on-site in the RTD branch office area. Computer systems will be set up to operate 24 hrs. per day, 7 days per week. Operations will be monitored outside of normal working hours and problems will be reported to designated persons who will respond and initiate correction of the problem.

The task shall be responsible for managing and maintaining the Research and Technology Organization Unit(OU) in the Langley LARC Activity Directory Structure. The management and maintenance of this OU shall consist of setting up the top level structure and populating it with the sub OUs to allow the CONITs team the ability to add, modify, and delete machines under the various RTD CONITs tasks.

Subtask D, Safety Critical Avionics Systems Branch: Grant users privilege to install and remove software at administrative/root level during periods of critical needs when the Certified System Administrator (CSA) is not available. During these times, the user will be responsible for notifying the CSA of any changes made and the CSA will be responsible for

restoring any required software/hardware that was modified, when responsibility for the system is returned to him. For example, when computers are stationed off-base for remote testing, it is not practical for the CSA to be present. However, critical changes in hardware/software may be necessary for a successful mission. The user will be empowered by the CSA to make such changes and report to the CSA any changes made. At the close of the mission when all equipment has been returned to LaRC, the CSA will verify the changes that the user reported and make corrections to the systems to conform to any required regulations.

General IT Support Services Performance Metrics

Performance Standard: Response to requests for help is given within Four hours. Customer requests are tracked and appropriate expert advice is sought when needed. Appropriate and correct advice is given

Performance Metrics:

Exceeds: "Meets" and customers rate service as very-good to excellent.

Meets: Response to requests for help is given within four hours. Customer requests are tracked and appropriate expert advice is sought when needed. Customers rate service as satisfactory or better.

Fails: Customers rate service as unsatisfactory

Performance Standard: The systems to which these services apply are kept up-to-date with minimum disruption in capability due to upgrades.

Performance Metrics:

Exceeds: Notifications of updates or upgrades are acted upon and approved upgrades are installed on schedule and without disruption; or "meets" and improvements to systems are recommended and adopted.

Meets: Notifications of updates or upgrades are acted upon. Approved upgrades are installed with minor delays and disruptions.

Fails: Any of the requirements of this subsection are not satisfied.

Performance Standard: The security of systems and data that fall under this TA is ensured

Performance Metrics:

Exceeds: The system meets the baseline IT security requirements for an information category; there are no unlatched vulnerabilities, unless the vulnerability has been mitigated by other action, accepted by line management and approved by the LaRC IT Security Manager; user accounts are removed by the close of business of the day that the requirement for an account is terminated.

Meets: Baseline IT security requirements for the information category are either met or have a waiver for non-compliance from the LaRC IT Security Manager; the system is up-to-date with security patches or has scheduled the installation of such patches at the completion of a test that precludes immediate installation; user accounts are removed within one week of the termination of the requirement for an account; any IT Security incidents are reported to the LaRC IT Security Manager as soon as possible after they are discovered.

Fails: The system does not comply with the baseline IT security requirements

for the information category and does not have a waiver for non-compliance from the LaRC IT Security Manager; the system is not up-to-date with IT security patches; user accounts, for which the requirement was terminated have not been removed after a period of two weeks; the system has an IT security incident that is not reported to the LaRC IT Security Manager.

5. SYSTEM AND APPLICATION DEVELOPMENT SERVICES

None required.

6. WORK-AREA SPECIFIC SERVICES

Work Area Title: Wake Vortex IT Support and Consultation

LaRC Manager:

Work Area Description: The Aircraft VOrtex Spacing System (AVOSS) is a ground based wake vortex spacing system designed for Air Traffic Control use. The system provides automated collection of relevant weather data, prediction of wake vortex behavior, derivation of safe vortex spacing criteria, estimation of system benefit and comparison of predicted and observed wake vortex behavior. (Hinton, 2001)

Work Area Requirements: The objective of this subtask is to provide Information Technology support and consultation for the wake vortex projects within RTD. A minimum system was deployed at the Denver International Airport (DIA) in August 2005. Additional requirements and support will be needed at Saint Louis International Airport in St. Louis, MO, and George Bush International in Houston, TX. Possible support may be needed at Frankfurt Germany, San Francisco, CA, Denver, CO, and Dallas/Ft.Worth, TX.

Specific goals are to support the collection of data at the remote sites, support the archive of collected data, provide consultation on connectivity, provide possible solutions to IT problems, provide minimal coding support and provide assistance when possible within the scope of this TA.

Work Area Title: RTD Numeric modeling support

LaRC Manager:

Work Area Description: Work area is a unified minicomputer cluster running Fedora Linux, and Portland Group Compilers. The applications are MM5 WRF-ARW, and WRF-NMM. This computer model supports the WakeVas effort and RTD's Wake Vortex studies, and more broadly, NASA's Aircraft Safety mission.

Work Area Requirements: Provide SA support for the cluster, and provide data collection for the model simulation, rudimentary checks of the model output, archive of input and output data, and interface with NASA specialists to improve the accuracy and performance of the model.

7. Exhibit A

[Exhibit A](#)

8. SPECIAL SECURITY REQUIREMENTS

None required.

9. SOFTWARE ENGINEERING PROCESS REQUIREMENTS

None required.

10. JOINT REVIEW SCHEDULE

There will be a joint review of the work of this task at meetings as needed. The following persons or their alternates are required to attend: TAM and Contractor personnel assigned to task. Technical performance, timeliness, cost, and staffing will be discussed.

11. PERIOD OF PERFORMANCE

This TA is effective from 02/01/08 to 04/27/09

12. TECHNICAL PERFORMANCE RATING

In evaluating Technical Performance, quality and timeliness shall be rated as follows:

Quality: 60% Timeliness: 40%

13. RESPONSE REQUIREMENTS

None.

14. FUNDING INFORMATION

Funding last submitted on 08/01/2008.

15. MILESTONES

None required.

16. DELIVERABLES

None required.

17. FILE ATTACHMENTS

[Others1](#)

[Others2](#)